



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/458,917	12/10/1999	MARTIN E. NEWELL	07844-353001	9475

21876 7590 07/02/2002

FISH & RICHARDSON P.C.
60 SOUTH SIXTH STREET
3300 DAIN RAUSCHER PLAZA
MINNEAPOLIS, MN 55402

EXAMINER

SAJOUS, WESNER

ART UNIT	PAPER NUMBER
2672	

DATE MAILED: 07/02/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No. 09/458,917	Applicant(s) Newell et al.
Examiner Wesner Sajous	Art Unit 2672

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on May 2, 2002.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-24 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are objected to by the Examiner.
- 11) The proposed drawing correction filed on _____ is: a) approved b) disapproved.
- 12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

a) All b) Some* c) None of:

1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

*See the attached detailed Office action for a list of the certified copies not received.

- 14) Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- 15) Notice of References Cited (PTO-892)
- 16) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) Information Disclosure Statement(s) (PTO-1449) Paper No(s). 2
- 18) Interview Summary (PTO-413) Paper No(s). _____
- 19) Notice of Informal Patent Application (PTO-152)
- 20) Other: _____

Art Unit: 2672

DETAILED ACTION

Remarks

This communication is responsive to the amendment and response dated May 02, 2002.

By this communication, claims 1-24 are pending in the application. Claims 1-22 are amended, and claims 23-24 are added.

Response to Arguments/Amendments

For brevity, the arguments are not repeated in detail but can be reviewed whenever necessary.

35 U.S.C. 112 Rejections

With respect to the 112 rejections, the amendment to claims appear to obviate the Examiner's rejections. As a result, the 35 U.S.C. 112 rejections are rescinded.

35 U.S.C. 102/103 Rejections

(a) With regard to the Applicants declaration at pages 5 and 6 of the response, it is noted that the user-specified change in position could have been enabled by cursor movement of a user interface, such as a drag or drop movement, as is well known in the art, so as to reposition the object.

Further, since Hosoya at col. 23, lines 66-67 suggest that an arbitrary region surrounding the curves may be set as a transformation region, such target location (e.g., the cursor pointing at a control point, as in fig. 12), could have been at a position other than the boundary of the curve or

Art Unit: 2672

surface. Hence, the ordinary skill in the art at the time of the invention would have found it obvious to modify the features of Hosoya, in order to meet the claimed invention without undue experimentation of Hosoya. The Applicants are further directed to the new ground of rejections set forth herein below.

Claim Rejections - 35 U.S.C. § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hosoya, patent number 5,852,447.

Considering claims 1-3, 5, and 11-12 Hosoya sets forth a character and figure transformation system. The system includes a transformation processing system comprises an input interface section 2, a transformation designating section 5, receiving input data from the interface section 2, for designating the manner in which characters or patterns are to be transformed. The transformation designation section 5 is deciphered to provide the functionality for the claimed "*receiving relocation information indicative of an intended change in position of a target location on a Bezier curve shape.... governed by control points.*" Numeral 7 designates a transformation section including a transformation calculation operation section 100 which is

Art Unit: 2672

coupled to the transformation designation section 5. Such is understood to provide the characterization for “*determining new positions for canonical locations on the shape based on predefined intended behaviors of the canonical locations.*” The canonical locations are treated as reference locations on the curve or pattern positions. The target location is noted be any point or region along the curve as illustrated in figure 12 and 13 or any point designated by the user operator. See figures 1, 13, 16 (B & C) for transformational change of coordinate data and/or fig. 22 and col. 15, lines 1-40 for the process of relocating control point on a Bezier curve during the transformation. A three-dimensional Bezier curve defining by coordinate points and control points is assumed by the system. Hence, owing to the implementation of the three-dimensional Bezier curve, the shape of the curve is interpreted to have a d-degree curve governed by a d+1 control points for d+1 canonical or reference locations; for instance, two-degree or 2D curve or a symmetrical shaped curve for tree canonicals; and three-degree or 3D curve or a cubical shaped curve for four canonicals, with “d” being a number between 1 and 4. See figure 2A and 3A. See also column 5, line 61 through column 6, line 50, and column 8, line 60 through column 10, line 35. Hence, the aforementioned claimed features including the d+1 control points for canonical locations could have been obvious teaching over the Hosoya’s reference, for purpose of specifying changes in shape in a Bezier curve.

Hosoya lacks fails to specifically suggest that the relocation information is indicative of a user-specified change in position of any arbitrary target location on a Bezier curve.

Art Unit: 2672

Nonetheless, Hosoya, at col. 11, lines 23-40 suggests that coordinate data subjected to transformation is relocated to a desired position so as to form a part of a the desired transformation region shape. At col. 15, lines 50-54 and col. 16, lines 37-42, Hosoya suggests that changes in transformation region for character sets is designated by a user, with the user relocating the apex positions (or control points/contours) into a desired shape. An arbitrary region surrounding the curves may be set as a transformation region (col. 23, lines 66-67).

Therefore, based on the above embodiment, the ordinary skill in the art at the time of the invention would have been motivated to consider modifying the features of Hosoya, as such, wherein the relocation information is indicative of a user-specified change in position of any arbitrary target location on a Bezier curve; for the purpose of allowing the operator to manipulate and make any changes desired in a graphical artwork.

Re claims 4 and 13, the claimed “adjusting the control points so that the Bezier shape contains the canonical locations in their new locations,” they are “adjusted using a pre-computed basis coefficient matrix” is obviously met by Hosoya’s disclosure because the coordinate data, after being subjected to the transformational operation, is relocated to such position as to form part of the desired transformation. See figs. 13-14 and col. 11, lines 25-30.

In claim 6, the claimed “rendering the Bezier shape based on the new positions of the d+1 canonical locations” is met by fig. 1, item 11.

As per claim 7, the claimed “target location in its changed positions lies on the rendered Bezier shape” is intrinsically included in Hosoya’s disclosure.

Art Unit: 2672

Re claim 8, the claimed “predefined intended behavior is expressed in response functions that define the relationship between changes in positions of target locations and changes in positions of canonical locations” is characterized by the illustration provided at figure 22. See also column 15.

All claimed subject matters recited in the invention of claims 9-10 are essential characteristics necessary for performing the system in Hosoya and would have been obvious over the prior art at the time of the invention was made. Such technique is well known in the art for manipulation of B-Spline curves or in two-dimensional tensor product surfaces manipulation.

In claim 14, the claimed “Bezier shape comprises a surface and in which the position of the target location is determined by forming a mesh on the surface and searching quadrilaterals of the mesh” is characterized by the illustration provided at figure 16B. See also figure 5B.

In claim 15, the claimed “processing the relocation information as a series of curve relocations” is met by fig. 1, item 100.

Claim 16 recites features equivalent to and performing the functions of claim 1, and is, therefore, subject to rejections for the same reasons and rationale set forth for claim 1, because the system of Hosoya is computer implemented.

Considering claim 17, Hasoya sets forth the following claimed features:

- a) the claimed “receiving relocation information indicative of an intended change in position of a target location on a Bezier curve shape.... governed by control points” is met by fig. 1, item 5;

Art Unit: 2672

b) the claimed “in response to the relocation information, “determining new positions for canonical locations on the shape based on predefined intended behaviors of the canonical locations” is characterized by fig. 1, item 100 including functions for expressing the predefined intended behaviors in scaled response functions that define the relationship between changes in positions of target locations and changes in positions of canonical locations;

c) the claimed “adjusting the control points so that the Bezier shape contains the canonical locations in their new locations,” is obviously met by Hosoya’s disclosure because the coordinate data, after being subjected to the transformational operation, is relocated to such position as to form part of the desired transformation. See figs. 13-14 and col. 11, lines 25-30; and the claimed “rendering the Bezier shape based on the new positions of the canonical locations so that the target location in its changed positions lies on the rendered Bezier shape” is intrinsically provided by fig. 1, item 11; except for the explicit recitation of the claimed relocation information is indicative of a user-specified change in position of any arbitrary target location on a Bezier curve. However, the aforementioned feature is noted to have been an obvious teaching over the Hosoya’s reference for at least the same reasons as claim 1.

The invention of claims 18, 23 and 24, substantially recite the underlying process steps of the elements of method claim 1. As the various elements of claim 1 have been shown to be obvious in view of the teachings of Hosoya, it is readily apparent the method disclosed by the applied prior art performs the recited underlying functions. As such the limitations recited in claims 23-24 are rejected for similar reasons given above for claim 21. It must be noted that the

Art Unit: 2672

user-specified change in position could have been enabled by cursor movement of a user interface, such as a drag or drop movement, as is well known in the art, so as to reposition the object. Further, since Hosoya at col. 23, lines 66-67 suggest that an arbitrary region surrounding the curves may be set as a transformation region, such target location (e.g., the cursor pointing at a control point, as in fig. 12), could have been at a position other than the boundary of the curve or surface. Hence, the ordinary skill in the art at the time of the invention would have found it obvious to modify the features of Hosoya in order to meet the claimed invention without undue experimentation of Hosoya.

Re claim 19, the claimed “intended predefined distortion is effected by modifying a surface equation to effect the setting of new positions of the control points” is characterized by the teaching provided at col. 11, lines 25-30. See figs. 13-14.

In claim 20, the claimed “distortion is symmetric.” See transformation 2 of fig. 7.

Re claim 21, the claimed “distortion is wave-like.” See transformation 7 of fig. 7.

As per claim 22, the claimed “the user interface element comprises a handle that is constrained to move in a single direction during dragging” is illustrated at figs. 11 and 12.

Conclusion

3. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

Art Unit: 2672

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any response to this action should be mailed to :

Box

Commissioner of Patents and Trademarks
Washington, DC 20231

or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

Or:

(703) 308-5359 for informal or draft communications, please label "PROPOSED" or DRAFT")

Hand-held delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA , 6th floor (receptionist).

Art Unit: 2672

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wesner Sajous whose telephone number is (703) 308- 5857. The examiner can also be reached on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Razavi, can be reached at (703) 305-4713. The fax phone number for this group is (703) 308-6606.

Wesner Sajous -WOS


Patent Examiner, art unit 2672

June 24, 2002



MATTHEW LUU
PRIMARY EXAMINER